



AF75

CLEANING TECHNOLOGY

Made in Germany

Fully automatic system with turbulence air-in-immersion AirFlow® technology for all maintenance cleaning tasks

For the mass cleaning of condensation filters of virtually all manufacturers, carriers from flux, condensate, oil, dust, grease

Usable chamber dimensions: W 770 ▪ D 1,280 ▪ H 600 mm (W 30.31" ▪ D 50.39" ▪ H 23.62")

Part number: 090075-AF



Certifications:

This system in its basic version was certified for its energy and water saving processing, for easy operability and for the standard integration of comprehensive safety features.

- Fully automatic process: Cleaning - rinsing - drying
- Short cycle times
- Loading and unloading in an empty process chamber (no contact to detergent)
- Control unit in switch cabinet on the rear side
- Processes and service intervals PLC controlled
- External 1000 l IBC releasing containers for cleaning and rinsing fluid
- Re-dosage directly from the IBC container
- External cleaning of cyclones and oven tubings possible
- Extremely compact - maximum capacity on a small footprint
- Certified for solar cell productions

Key applications



Coolers (e.g. Soltec)



Condensation filters (e.g. Rehm)



Oven tubings (e.g. ERSA)

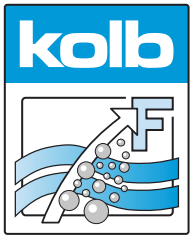


Solder carriers

kolb AF75 is a state of the art one chamber system with the economic and environmentally friendly AirFlow® turbulence air-in-immersion technology and ClosedLoop water reprocessing. The device is especially designed for the bulk cleaning of condensation traps and filters. It cleans traps of virtually all manufacturers from condensate from flux, oil, dust, grease.

Up-to-date reflow-soldering systems as well as solar process ovens usually have flux management systems (cooling unit, filters, heat exchanges, containers / plates) which during operation will be subject to contamination (with flux / colofonium). Thorough cleaning helps to regain proper functioning. The system is (in series use) perfectly suited for the construction of complete washing centers that comply with the latest technical state of the art (e.g. ZeroWater technology) and can deliver extremely high throughput quantities.

The cleaning system can be operated with all common electronics cleaning supplies (detergents / chemistry, etc.) which are approved by the manufacturer.








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Application overview

				
Not suitable	Not suitable	Most suitable	Not suitable	Most suitable
Assembled PCBs Hybrids Misprints	Stencils Screens, PumpPrints Misprints	Solder frames Solder carriers Solder masks	ESD Boxes Containers Magazines	Condensation traps Filters Steel sheets

Cleaning (key process 1): The process chamber is empty during the loading (no contact to the detergent). After placing the goods to be cleaned into the chamber it is pressure flooded with fine filtered cleaning fluid from a separate IBC tank A (TA) through a PLC-controlled AirFlow® process. The AirFlow® technology is an air-in-immersion process. It differs from common spray-in-immersion applications, as the goods to be cleaned here are actively submerged by the cleaning fluid using compressed air. This whirling technology guarantees a permanent all over active flushing without dead spots so that the contamination is fast and efficiently cleansed off. The integrated PulseFlow® technology allows the cleaning of external devices such as cyclones, tubings, etc.

Rinsing with tap water (key process 2): After the goods are cleaned the likewise filtered water, is pumped into the process chamber from a second IBC tank B (TB). Tap water has (compared to DI / DM water) the advantage of lower surface tension and thus flushes also critical points as low standoffs more efficient.

Drying (key process 3): Drying is carried out via a threefold HotSpeed hot air drying module integrated into the process chamber lid. The HotSpeed unit with fan and heating coil in one air duct evaporates completely the residual moisture at 55 - 60 °C (131 - 140 °F).

Maintenance: The system has a large maintenance door on the right side and requires only little maintenance. In general, only exhausted cleaning mixture has to be exchanged, as well as the filters have to be cleaned or changed if necessary. In the maintenance area among others are the pump-out set and the optional re-dosage unit with space for a 5 l additive container.



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Main standard features

- AirFlow® technology bundle: magnetically coupled XXL-Power pump units, immersion / compressed air configuration
- Programmable Logic Controller (PLC)
- High resolution 7" (1,024 x 600 px) display with capacitive multi-touch
- Integrated control unit (switch cabinet) on the rear side
- Function package "Basic" (incl. washing basket, set-up trolley, 2 x 1000l IBC containers with matching rack and safety pallet. overflow protection for IBC container (tank B), connection piping to the machine)
- Full flow coarse filter (process chamber)
- Skimmer fine filtration for cleaning circuit
- Skimmer fine filtration for rinsing circuit
- Fine filter the cleaning circuit / cleaning tank A (TA)
- Fine filter the rinsing circuit / rinsing tank B (TB)
- ClosedLoop reprocessing of cleaning and rinsing fluids
- Automatic re-dosage unit for 25 l detergent container
- Threefold Hotspeed warm air dryer (55 - 60 °C / 131 - 140 °F)
- Safety features: safety interlock on the process chamber door, overflow alarm for all tank sections, overheating protection for all heating and drying elements, end switches for all motor-driven valves and drives, personnel protection insulation
- Machine body made of stainless steel
- Process sections made of stainless steel

Main options

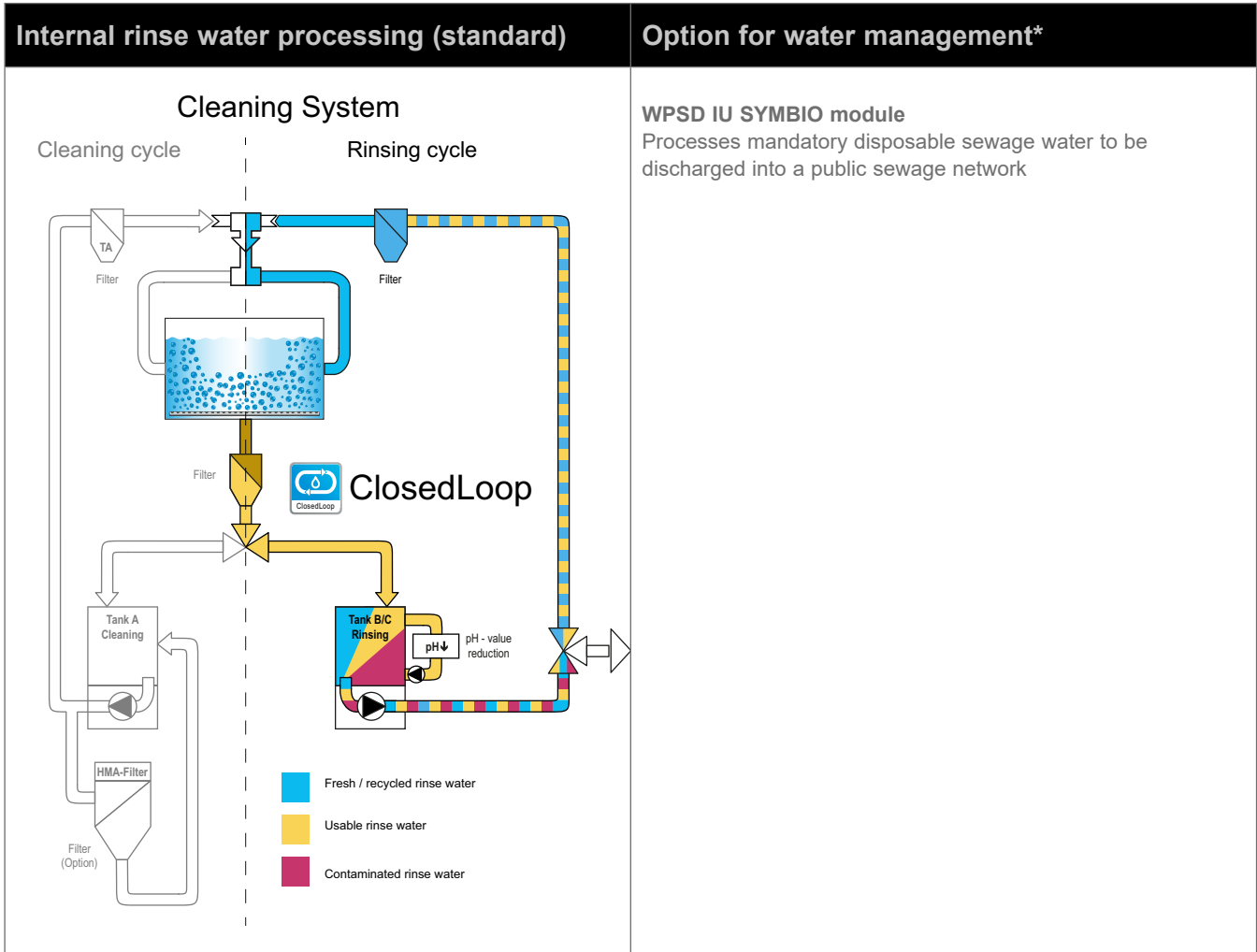
- Function package WPSD IU Wastewater Treatment Unit (incl. WPSD IUAF30 SYMBIO® module, pH-lowering unit with pH measuring probe, pH re-dosing, control valves, two heavy metal adsorber cartridges, two cartridge deaerators)
- Automatic re-dosage unit for 5 l additive container
- Heater Tank A (TA)
- Circuit unit for external cleaning of containers (e.g. cyclones, tubings)
- Remote Control (remote monitoring, mailing, etc.)



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* Operating companies of industrial cleaning systems are responsible for proper disposal of wastewater / rinse water and (wasted) cleaning detergent. Further information on wastewater management at www.kolb-ct.com/systems/water-management/, consulting requests to info@kolb-ct.com



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Technical data

Technology base	kolb AirFlow®, kolb PulseFlow®
Usable chamber dimensions	W 770 ▪ D 1.280 ▪ H 600 mm (W 30.31" ▪ D 50.39" ▪ H 23.62")
Usable basket size	W 705 ▪ D 1.165 ▪ H 510 mm (W 27.75" ▪ D 45.86" ▪ H 20.07")
Content process chamber	approx. 750 l
Volume IBC tank A (cleaning)	approx. 1.000 l
Volume IBC tank B (rinsing)	approx. 1.000 l
Power supply	400 V AC, 16 A, CEE plug / 3 Ph / 50 or 60 Hz
Power consumption	6 kW
Control system	PLC (Eaton)
Temperature load	up to 80 °C (176 °F)
Filter system	up to three stages - 1. Full flow coarse filter < 2 mm (0.08"), 2. Skimmer coarse filter, 3. Fine filter 20" / 100 - 50 - 10 µm in the circuits
Supply connection (compressed air)	6 - 10 bar (87 - 145 psi) - 110 l / min, connection for 12 mm (0.47") compressed air hose
Rinse water drain connection	connection for 1" hose
Exhaust connection	Ø 160 mm (6.3"), exhaust capacity > 1,100 m³ / h (38,847 ft³ / h)
Footprint	940 x 2.360 mm (37" x 92.91)
Operating condition room temperature	20 - 35 °C (68 - 95 °F)
Operating noise	59 dB (A)
Empty weight	820 kg (1,808 lbs)

